

REMARKS

Claims 1 and 15 have been amended, claim 2 has been cancelled and new claim 18 has been added. Claims 1, 3-15 and 17-18 remain in the application.

Support of amendments can be found in the drawings; no new matter is added with these amendments.

Claims 1-3 were rejected under 35 USC 102(b) as being anticipated by Byrnes et al. (U.S. 5,449,152), and the remaining claims were rejected under 35 U.S.C. 103(a) using Byrnes et al as the primary reference.

Byrnes et al fails to disclose or suggest two coaxial viscoelastic sleeves with their concave end faces facing along the common axis of the sleeves (see ANNEX A):

- according to figure 5 of Byrnes et al, the end face of the internal sleeve is facing according to arrow N1, the latter diverging from the common axis of the sleeves;
- the end face of the external sleeve is facing according to arrow N3, which diverges - to a smaller extent, from the common axis also; and
- the end face of the intermediate sleeve is facing according to arrow N2, also diverging from the common axis of the sleeves;
- according to figure 7 of Byrnes et al, the internal sleeve's end face looks in the direction of arrow N1, diverging from the common axis; and the external sleeve end face looks in direction of arrow N3, converging on common axis.

Byrnes et al fails to disclose or suggest two coaxial viscoelastic sleeves having their shear modulus g_1 , g_2 , thicknesses e_1 , e_2 , inside radii R_1 , R_2 and axial length (as

~~measured~~measured between bottoms of heir meniscuses shaped end faces) satisfying the relationship

$$g1 \cdot \frac{L1}{\ln(1 + \frac{e1}{R1})} = g2 \cdot \frac{L2}{\ln(1 + \frac{e2}{R2})}$$

where \ln is the Neperian Logarithm.

Given an internal sleeve having a specific geometry ($e1$, $R1$ and $L1$) and shear modulus $g1$, this relationship enables defining the axial length $L2$ of an external sleeve as a function of its thickness $e2$, radius $R2$ and shear modulus $g2$; this enables providing identical global stiffnesses to the internal sleeve and to the external sleeve (see also pages 12-16 of the amendment filed August 19, 2003).

New claim 18 further distinguishes over Byrnes et al by reciting that axial length of the external part of a sleeve is greater than the intermediate length of the sleeve, as measured between the two bottoms of meniscus shaped end faces; that is, the sleeve length increases from an intermediate portion of the sleeve to an external portion of the sleeve; this is in direct and full contradiction with the teaching of Byrnes where the radius length product is a constant.

This increase in the sleeve length will induce a higher stiffness of the external portion of the sleeve, as compared with the stiffness of the intermediate portion of the same sleeve; that is, the stiffness of the sleeve will not be uniform throughout the sleeve, in contradiction with Byrnes et al teachings.

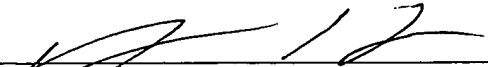
No additional claim fee is required by this Amendment.

In view of the above, it is believed that all remaining claims are in condition for allowance, and a notice to that effect is earnestly solicited.

Respectfully submitted,

Nicolas CERTAIN

8-12-04
Date

By: 
Richard L. Fix
Reg. No. 28,297

STURM & FIX LLP
206 Sixth Avenue, Suite 1213
Des Moines, Iowa 50309-4076
Phone: 515-288-9589
Fax: 515-288-5311